

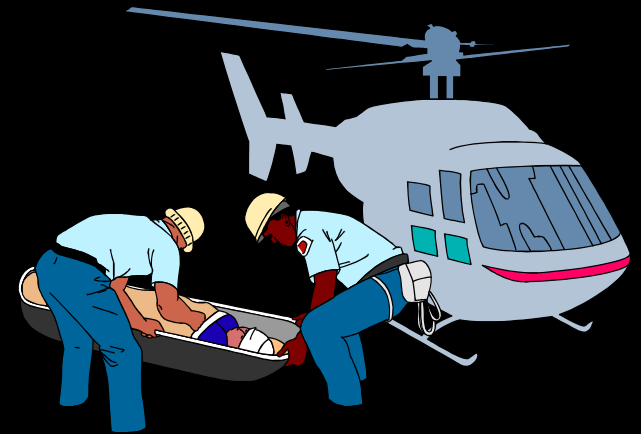
MCI Innovations: The Arizona Triage System



Dean Pedrotti
Phoenix Fire Department

Goal

To introduce attendees to the Arizona Triage System, demonstrating how it can improve EMS response to major medical incidents.





After today's talk, you should:

- Be familiar with the *START* triage method.
- Understand the Arizona Triage System.
- Identify the use of EMS Tactical Benchmarks.
- Describe what to do when first arriving at a multi-patient incident.

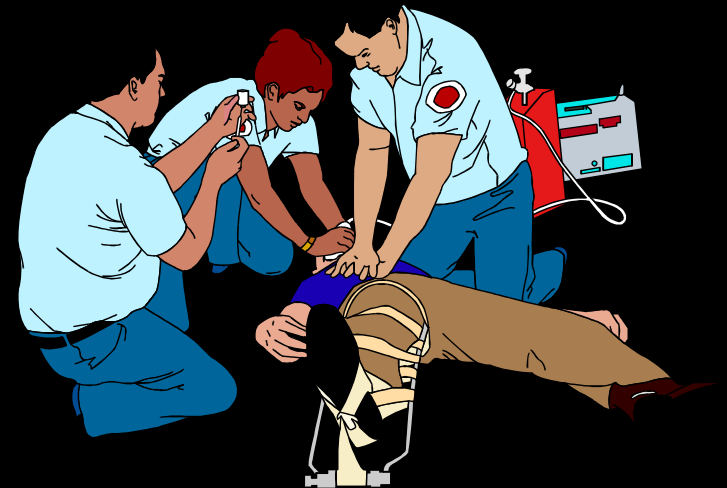
Phoenix Fire Department

- 477 square miles
- 1.3 million residents
- 50 fire stations
- 130,000 incidents



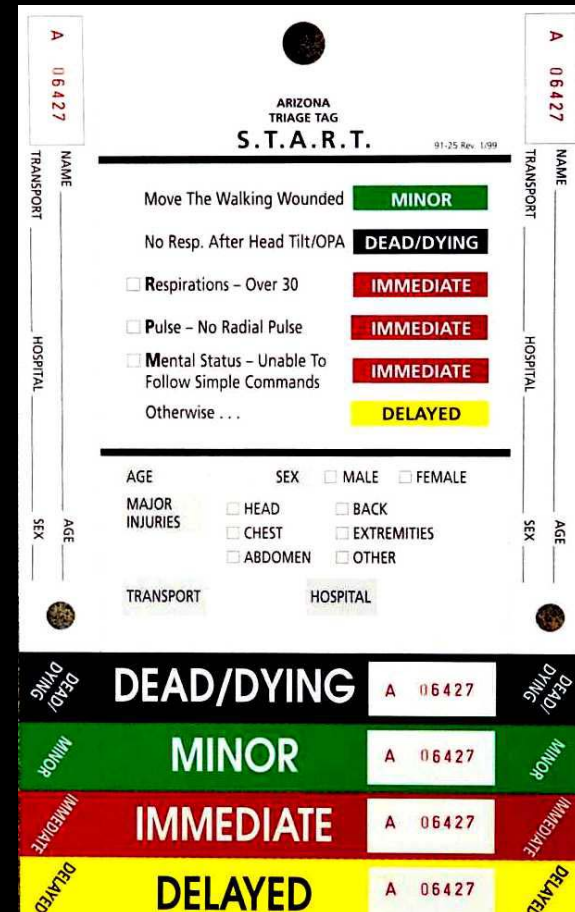
Simple Triage & Rapid Treatment (*S.T.A.R.T.*)

- Developed by the Newport Beach (CA.) Fire & Marine Dept.
- Current DOT Standard



Where is *START* used ?

- ☀ California
- ☀ Oregon
- ☀ Washington
- ☀ France
- ☀ Saudi Arabia
- ☀ Israel



The image shows an Arizona START Triage Tag form, which is a standardized tool for triaging injured patients. The form is titled "ARIZONA TRIAGE TAG S.T.A.R.T." and includes the date "91-25 Rev. 1/99". It is designed to be filled out by medical personnel to categorize patients based on their injuries and vital signs. The form includes fields for patient identification (NAME, AGE, SEX, HOSPITAL, TRANSPORT) and a series of checkboxes for clinical assessment. The assessment categories are: MINOR (green), DEAD/DYING (black), IMMEDIATE (red), and DELAYED (yellow). The form also includes a section for MAJOR INJURIES (HEAD, CHEST, ABDOMEN, BACK, EXTREMITIES, OTHER) and a section for TRANSPORT and HOSPITAL. The form is shown in a vertical orientation, with the patient information at the top and the assessment categories at the bottom.

ARIZONA TRIAGE TAG
S.T.A.R.T.
91-25 Rev. 1/99

NAME: _____
TRANSPORT: _____
HOSPITAL: _____
AGE: _____
SEX: _____

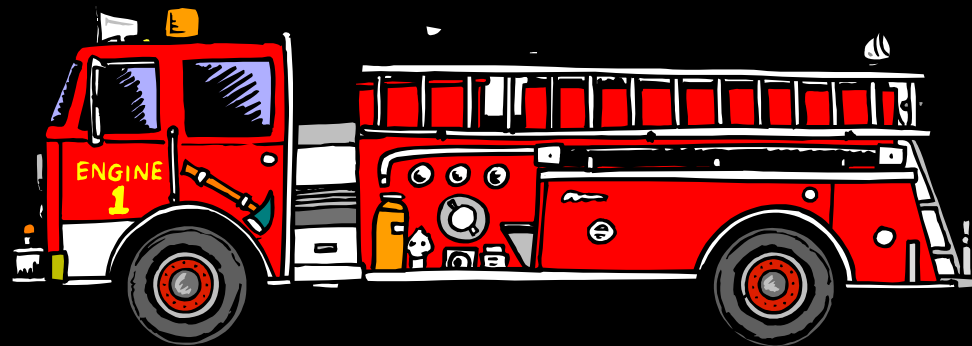
Move The Walking Wounded **MINOR**
No Resp. After Head Tilt/OPA **DEAD/DYING**
☐ Respirations - Over 30 **IMMEDIATE**
☐ Pulse - No Radial Pulse **IMMEDIATE**
☐ Mental Status - Unable To Follow Simple Commands **IMMEDIATE**
Otherwise . . . **DELAYED**

AGE _____ SEX ☐ MALE ☐ FEMALE
MAJOR INJURIES ☐ HEAD ☐ BACK ☐ CHEST ☐ EXTREMITIES ☐ ABDOMEN ☐ OTHER
TRANSPORT _____ HOSPITAL _____

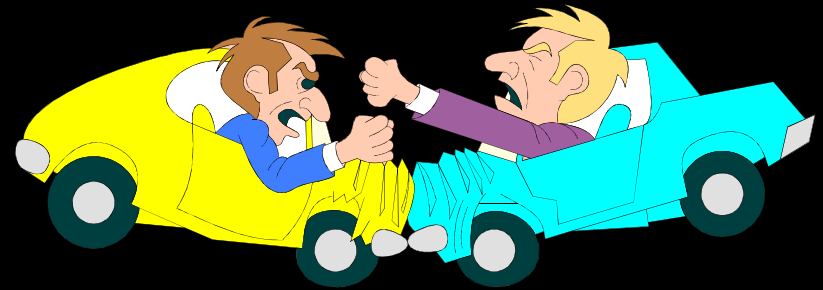
DEAD/DYING A 06427
MINOR A 06427
IMMEDIATE A 06427
DELAYED A 06427

MCI Terminology

- M.P.I. -- Multi-Patient Incident (< 25)
- M.C.I. -- Mass Casualty Incident (25 - 100)
- M.O.I. -- Mechanism of Injury
- M.V.C. -- Motor Vehicle Collision



PFD Study of Major Medical Events -- 1996



- 87% were MVAs
- Averaged 5 patients
- 20% had 7 or more patients
- Only 4% had 10+ patients

Major Medical Events -- Field Assessment

- 50% were Priority I's
- 25% were Priority II's
- 23% were Priority III's



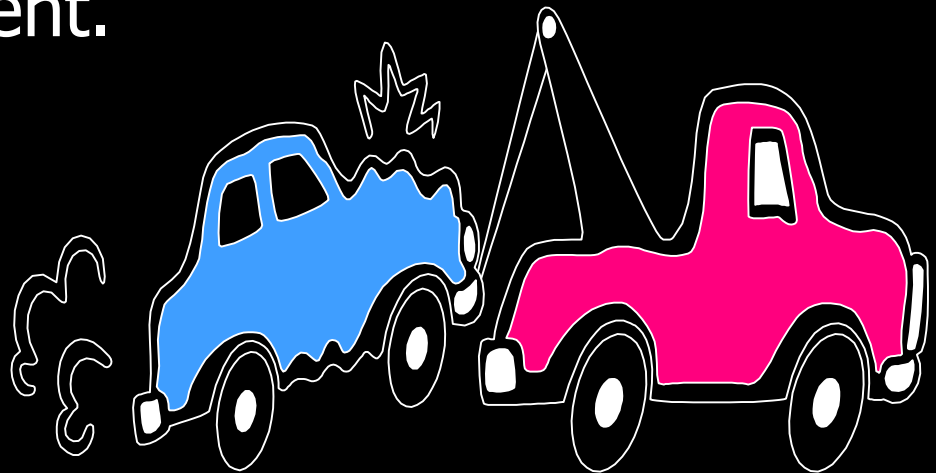
PFD Study of Major Medical Events -- 1997

- 86% were MVAs
- Averaged 6.2 patients
- 46% had 7 or more patients
- 11% had 10+ patients



Major Medical Events

- Approximately 100 events throughout Arizona each year.
- Range from 5 to 10 patients at each incident.



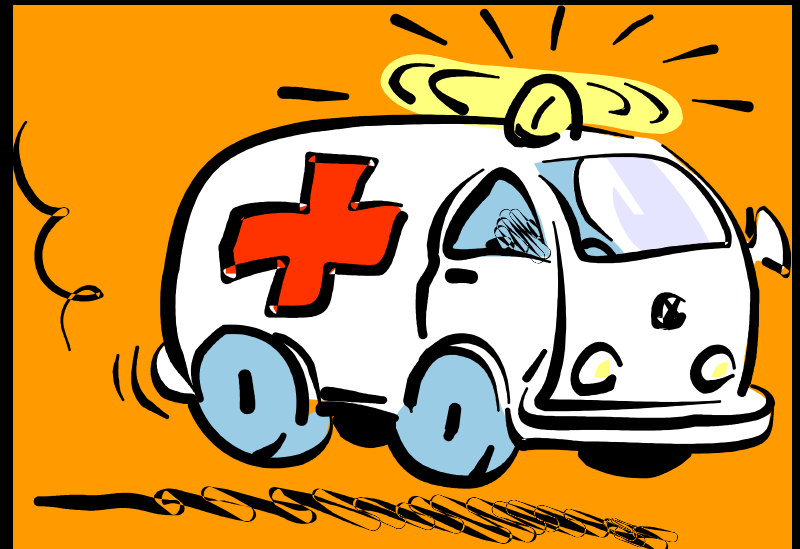
Plan, Prepare & Train for . . .

- 3 Vehicle Accident involving 6-7 patients
- Initial Triage Yields
 - 1 Immediate
 - 4 Delayed
 - 1 Minor
- 1 Delayed later upgraded to Immediate



Triage Considerations

- What triage process do you use?
- What type of tag do we triage with ?
- What color ?



S.T.A.R.T. stands for :

- Simple
- Triage
- And
- Rapid
- Treatment



Why Use *START*?



- Fast
- Simple
- Easy to Use
- Easy to Remember
- Consistent

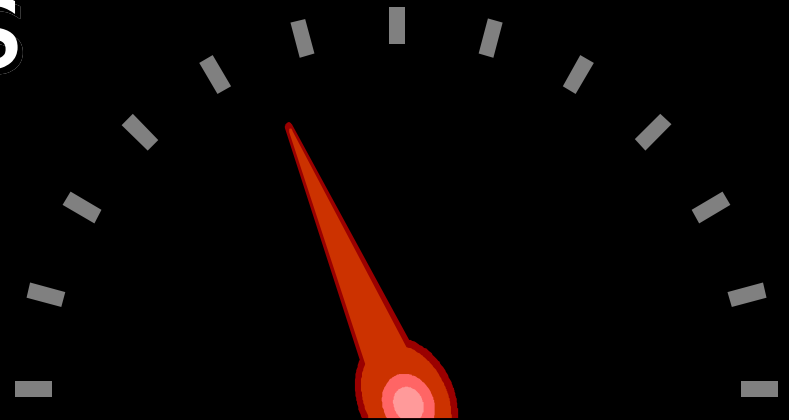


START Assessment

Respirations

Pulse

Mental Status



START Now . . .



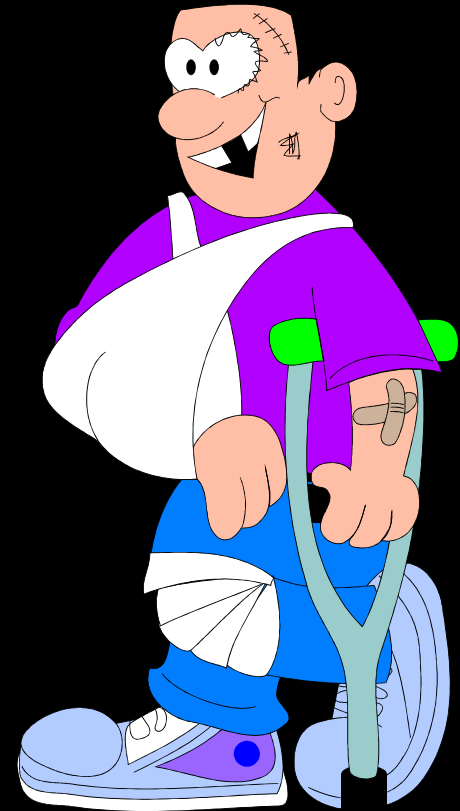


Patient 1

- Patient 1 is a 21 YOM c/o pain to his upper right leg. You see an obvious open right femur fracture.
- What is your *START* assessment?
- What is your treatment?

Patient 1

- He is awake.
- His airway is open (remember he's talking).
- His respiration's are over 30/ min.





Patient 2

- Patient 2 is a 15 YOF c/o numbness to her legs and is unable to move them. She has a 2" laceration to the left skull with moderate bleeding.
- What is your *START* assessment?
- What is your treatment?



Patient 2

- Her airway is open.
- Her respiration's are slower than one every two seconds.
- She has a radial pulse.
- She is alert and oriented.



Patient 3

- Patient 3 is a 40 YOM who looks real bad. He's unconscious, pale and limp.
- What is your *START* assessment ?
- What is your treatment ?

Patient 3

- You open his airway and insert an OPA but found there is no breathing.

What do you tag him





Lessons Learned

"Time and time again the catastrophically injured, who have almost no chance of survival, are provided with heroic resuscitation efforts and are transported by the first crews, leaving little or no personnel and equipment in the field."

Dr. Alexander Butman
Disaster Researcher



Triage Categories

IMMEDIATE

- All patients whose RPM is altered
- Fold & tear off tag
- Retain tracking slip
- Place "Immediate" Label on Victim



Triage Categories

DELAYED

- Most victims in this category
- Includes those w/ significant MOI, but whose RPM is intact



Triage Categories

MINOR

- These are the “walking wounded.”
- Direct them to a gathering place.
- Tag `em later!



Triage Categories

DEAD /DYING

- Mortally wounded
- Probably will die despite our efforts
- Difficult decision
- Resources often wasted here

Only 3 Treatments During Triage

- *Open* Airway / Insert OPA
- *Stop* Bleeding
- *Elevate* Extremities

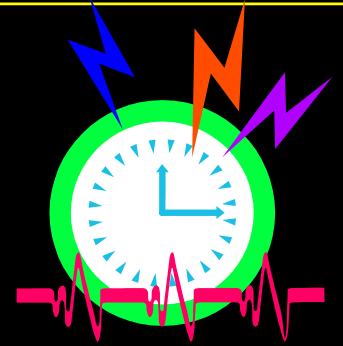


Triage Priorities

- Find & transport all “Immediates”
- Reassess “Delayed” & upgrade (Serious MOI / Age/ History)



Triage Goal



Focus on the
“Immediate” patients.
Everyone else can wait !



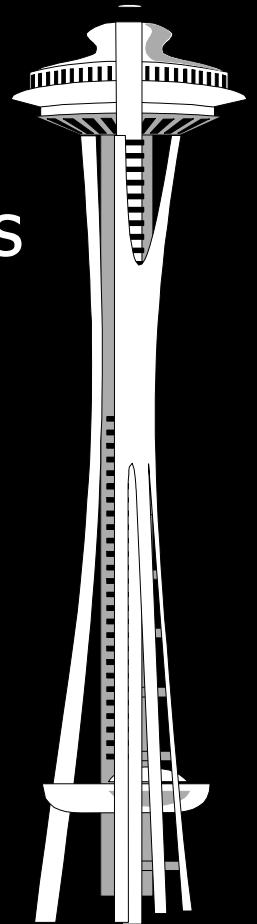
Changes to *START* during an MPI (5 - 10 patients)

- Don't move **Minor** patients!!
- Reassess **Delayed** patients as soon as possible and upgrade to **Immediate** if necessary (Serious MOI / Age/ HX).

Triage Tag Field Trial

Three triage tags

- Phoenix FD -- Separate colored tags
- Seattle FD -- Triage tape w/ TX tag
- California -- Multi-colored tag





Triage Tag Field Trial

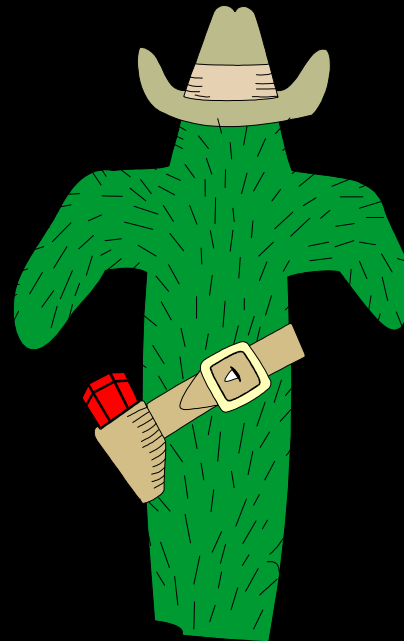
Three methods of attachment

- Nylon tie
- String
- Elastic strap

Triage Tag Field Trial

Three methods of donning triage kit

- Fanny pack
- Chest harness
- Holster



Triage Kit Contents

- 35 Triage Tags
- 15 Immediate Labels
- 35 Nylon Ties
- 6 Assorted. OPAs
- 3 Ink Pens
- 1 Scissors



Using the Arizona Triage System

1- Evaluate patient
using *START*.

ARIZONA TRIAGE TAG S.T.A.R.T.		91-25 Rev. 1/99
Move The Walking Wounded	MINOR	
No Resp. After Head Tilt/OPA	DEAD/DYING	
<input type="checkbox"/> Respirations – Over 30	IMMEDIATE	
<input type="checkbox"/> Pulse – No Radial Pulse	IMMEDIATE	
<input type="checkbox"/> Mental Status – Unable To Follow Simple Commands	IMMEDIATE	
Otherwise . . .	DELAYED	

Using the Arizona Triage System

2- Tear off bottom of tag & remove tracking slip.



Using the Arizona Triage System

3- Place tracking slip in kit.



Using the Arizona Triage System

4- Attach tag to patient with nylon tie.



Using the Arizona Triage System

5- If **Immediate**,
affix adhesive
label.



6- Give tracking slips to Triage Officer.

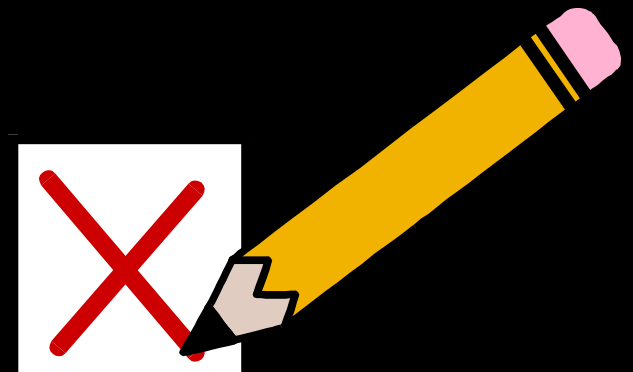


Once triage is complete . . .

- Give a Triage Report to Command
*"Triage to Command...We have 13 patients,
4 Immediate, 5 Delayed, 3 Minor and 1
Dead."*
- Give tracking slips to Command

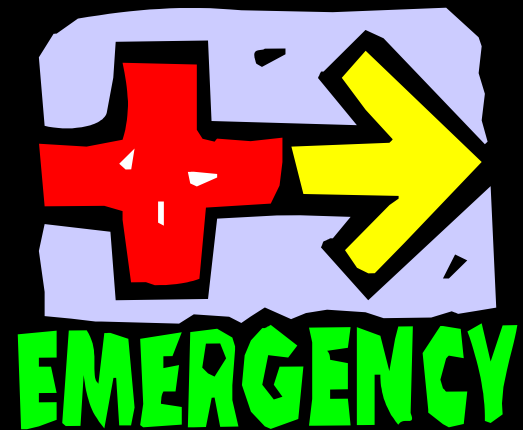
Tactical Benchmarks

- Triage Report Complete
- Declaration of:
"All Immediates Transported"



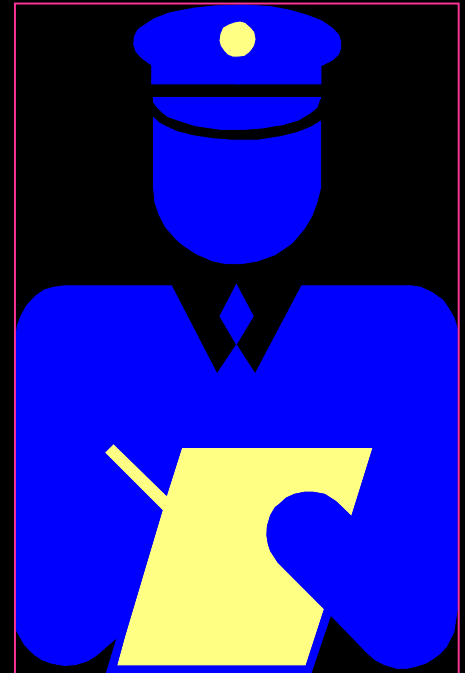
Transportation

- Second Tracking Slip-- Completed and kept by Transportation Sector
- What is the minimal info. Needed?
 - Transport Unit ID
 - Receiving hospital
- Fill in name/age/address as available



EMS Documentation

- Triage tags can be used in lieu of a patient care report (EMS form)
- Command will determine when *START* will occur





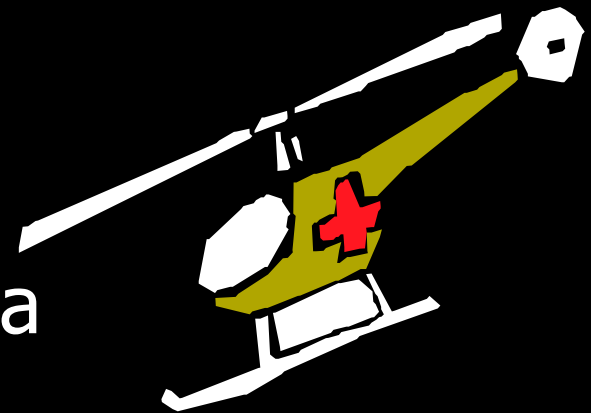
First Unit On Scene

- Give on-scene report
- Survey the scene
- Control traffic
- Pull a handline
- Begin triage
- Request resources
- Give Triage Report
- Establish treatment area
- Assign tasks
- Assign sectors
- Notify hospitals

Multi-Patient Incident (MPI)

5-10 patients

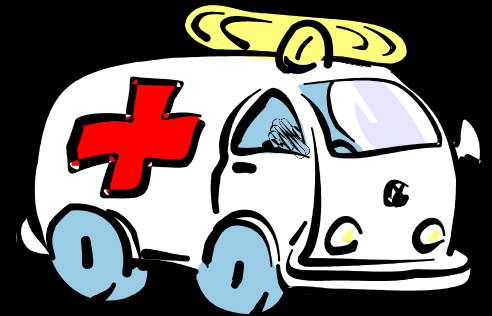
- Triage function assigned
- Nearby hospitals notified
- Consider a treatment area
- Order ambulances early
- Complete EMS Tactical Benchmarks



Multi-Patient Incident (MPI)

11-25 patients

- Triage Sector assigned
- Area Hospitals Notified
- Establish a treatment area
- Complete EMS Tactical Benchmarks





Mass Casualty Incident (MCI)

25-100 patients

- Triage Sector(s) assigned
- Full Hospital System Notification
- Multiple treatment area(s) established
- Establish Medical Supply Sector
- Complete EMS Tactical Benchmarks



MCIIs involving more than 25 patients

- Assign an Ambulance Coordinator
- Do we keep ALS personnel on scene?
- If a huge incidents, direct first ambulance *away from* nearest hospitals.



Common Pitfalls at MCIs

- Failure to alert
- Failure to triage
- Slow “primary” stabilization
- Slow movement & collection
- Inappropriate, time consuming care
- Premature transportation

*From Responding to the Mass Casualty Incident : A
Guide for EMS Personnel by Alexander Butman*



Common Pitfalls (Cont'd)

- Improper use of personnel
- Poor distribution of patients
- Poor EMS Command
- Lack of preparation or training
- Failure to adapt
- Poor communication

• *From Responding to the Mass Casualty Incident : A Guide for EMS Personnel* by Alexander Butman



Triage Kit

Bound Tree Medical
2465 S. Industrial Park Ave.
Tempe, AZ 85282
Ph. 800-533-0523



Disaster Mannequins

Supersigns, Inc.
1335 W. University Dr.
Suite 18
Tempe, AZ 85281
Ph. 480-968-2200

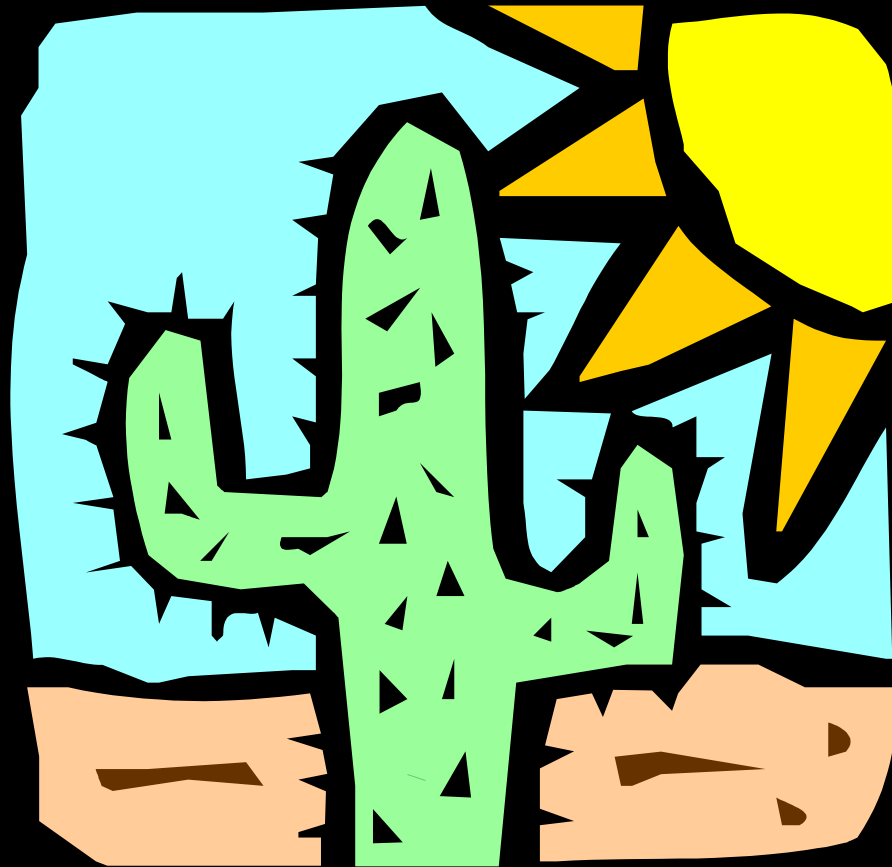


Teaching Material

Initial Triage Training Curriculum
Advanced MCI Curriculum
Powerpoint Slides

www.AEMS.org

THE END



Initial Triage Training



Phoenix Fire Department